



**PEOPLE
AND
PLACES**

**DESIGN OF THE BUILT
ENVIRONMENT AND BEHAVIOUR**

MARCH 2017

This report follows an inquiry chaired by Baroness Whitaker and Professor Alan Penn, Dean of The Bartlett, University College London.

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**“We shape our
buildings thereafter
they shape us”**

Winston Churchill

PEOPLE AND PLACE

DESIGN OF THE BUILT ENVIRONMENT AND BEHAVIOUR

Dedicated to the late Sir Peter Hall

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FOREWORD

This report is a very valuable contribution to the debate about how we can meet the challenge of making a healthier, happier and more prosperous and sustainable country through the changes we make in our built environment.

The challenge is all the more demanding because of the harsh economic climate for decision-makers and the impending redefinition of our legal framework when we depart from the European Union.

The Design Commission has recognised that it is how people react that matters – how they work and interact- whether they keep active and healthy. The Commission has come up with solid evidence in difficult areas about what in our built environment makes our lives better.

It has looked at what can make us healthier and happier, what can make communities come together, and what can preserve our air quality and save energy.

It has looked at what can make us healthier, what can make communities get on better with each other, what can preserve our air quality and save energy and what can enable higher productivity.

All policy-makers, whether at local or national level, should take note of the research the Commission has pulled together; and the private sector can help lead the way through the innovative techniques and design solutions it is well placed to launch.

They will find ideas and research which can help us all to live in a better place.



Richard, Lord Rogers of Riverside

President

All Party Parliamentary Design and Innovation Group



Kevin McCloud MBE

Designer and Presenter

Grand Designs

March 2017

EXECUTIVE SUMMARY

Policy making for the built environment has traditionally been centralised, but muddled and fragmented.

We argue that there are clear design principles that can be led at different governmental levels, and that the private sector has a key role to play as a behavioural change leader, rather than simply an implementer of policy.

The Design Commission believes that in designing and constructing the environments in which people live and work, architects and planners are necessarily involved in influencing human behaviour. Throughout this inquiry, the Commission showcase case studies and best practice examples of how infrastructure can be used to design for positive behaviours and how design-led planning policy can create environments in which individuals and communities thrive.

This inquiry draws on a number of submissions and reports, from Government, Parliament, research bodies and the private sector. It also takes into account the devolution agenda, City Deals and the new Industrial Strategy, alongside recent developments at the Ministerial level. The establishment of the new Department for Business, Energy and Industrial Strategy and the way in which it interacts with the Department of Communities and Local Government may also serve to change the relationship between the individual, local authorities and Whitehall.

This also takes place in the context of the UK's historic decision to leave the European Union, with the likelihood of a shake-up of the UK's environmental legislation.

The inquiry heard evidence on four specific areas that are believed to improve the relationship of citizens within the built environment. This report is structured around those four areas:

1. healthy behaviours
2. environmentally sustainable behaviours
3. socially cohesive behaviours
4. productive, innovative and creative behaviours

The first pair (healthy and sustainable behaviours) act mainly through the effects of the built environment on individuals and their choices, whilst the second pair (social and productive behaviours) act mainly through the way that the environment affects the way that people are brought together or kept apart.

In Chapter One we considered evidence that the built environment can exert both positive and negative effects on human behaviour and therefore how it affects health. The nature of wellbeing was examined, especially with regard to how people are affected by their surroundings. We took the view that research into wellbeing in the built environment should follow the 'Haldane principle', where research funding is led by researchers rather than politicians. The inquiry also considers how government and local authorities procure services, and how the relationship between various national, council and private bodies can improve public health outcomes.

In Chapter Two we focused on sustainability and the natural environment. Starting with the Garden Cities movement, the report goes on to look at how policy makers can seek to improve biodiversity

in our urban and sub-urban areas. It then considers how to increase the use of public transport and improve walking and cycling facilities as well the role that design can play in making infrastructure more accessible. Finally, it makes a number of recommendations to improve airquality and energy efficiency.

Chapter Three focused on how the design aspects of the built environment can affect social cohesion. Following on from the House of Lords Select Committee report 'Building Better Places', our report examines the five characteristics of successful local places and the elements that make them successful. We considered how to empower councils and local people to establish inclusive design principles for the built environment which come from a 'bottom-up' approach, as well as enabling residential developments that prioritise pedestrians and high-streets in order to serve the local and regional economy better.

In Chapter Four, we developed recommendations, based on evidence about how the design of the built environment can drive innovation and improve efficiency for work environments and communities. In the context of Britain's productivity crisis, the report looks at how offices often fail to get the best out of the people who work inside them, not least because of a lack of access to daylight and fresh air. It looks at best practice from Germany and Sweden, and makes suggestions as to how government can work with spatial experts and the private sector to give workers more autonomy over their working environment.

Finally, the report looks at how a design-first approach can increase access to affordable housing. By working across the country with councils and housebuilders, we considered how housing can be better seen as integral to the built environment, rather than auxiliary to it and how central government can support housing associations and the private sector to build quality and employ architectural design in a way that does not further restrict access to accommodation, especially for first-time buyers.

People and Place: Design of the Built Environment and Behaviour is about how good design can be promoted by central government, local authorities and the private sector to create a built environment that works for everyone. It sets out clear recommendations for policy makers to help establish communities that are healthier and more sustainable and in so doing promote a more socially cohesive and productive attitude to the places that we work and live in.

RECOMMENDATIONS

1. Healthy Behaviours

We found evidence that the built environment can exert both positive and negative effects on human behaviour, thus affecting health.

RECOMMENDATION 1

Government should integrate and co-ordinate decision making for public health with the way in which this interacts with the public realm.

RECOMMENDATION 2

As a major procurer of buildings and services, Government should play a lead role in encouraging high design standards and sharing best practice with the private sector. Ministers should co-ordinate the work of research councils to promote longitudinal studies into the built environment, especially post-occupancy evaluation and learning, as well as investigating long-term trends.

RECOMMENDATION 3

Government should require Health Impact Assessments to be a material consideration in planning decisions on major developments.

RECOMMENDATION 4

Health and Wellbeing Boards should be obliged to develop links across local authority structures to improve public health considerations in planning and other relevant decisions.

2. Environmentally Sustainable Behaviours

We heard evidence that the design of the built environment can encourage people to adopt more (or less) sustainable behaviours.

RECOMMENDATION 5

Local authorities should ensure adequate capacity in the planning system – working in the context of localism, devolution, and elected City Mayors – to ensure that best practice is followed when considering the design, construction and future management and maintenance of the built environment in new developments.

RECOMMENDATION 6

Local authorities should set minimum design standards to access to public transport infrastructure and the public realm when making planning decisions.

RECOMMENDATION 7

Targets should be set for the promotion and provision of pedestrian and cycling infrastructure in local authority development plans.

RECOMMENDATION 8

Biodiversity should be placed at the heart of all new developments and public places, including adopting a replacement ratio of 2:1 when and where mature trees are felled as part of local authority works or planning permission approvals.

RECOMMENDATION 9

Regulations concerning energy use and air quality should move rapidly from one of model-based compliance to one of measured performance-in-use with full disclosure.

RECOMMENDATION 10

Given the almost universal difficulty of operating buildings in the manner that was anticipated, a Royal Commission or Select Committee inquiry should be established to explore the mismatch between design intent of control systems and their operability and associated aspects.

RECOMMENDATION 11

In order to facilitate demand reduction for energy, Government should commit to make full use of smart meters and the internet of things to track trends across the general energy network.

3. Socially Cohesive Behaviours

Evidence was found of the effects of the design of the built environment on social cohesion through its effects on creating or inhibiting co-presence in space.

RECOMMENDATION 12

Local authorities should appoint bodies that work to develop the principles of an inclusive built environment that does not discriminate against users and use a scrutiny process to ensure that design works for everyone.

RECOMMENDATION 13

New developments should be built around a “foot-first” approach that prioritises the individual user over private vehicles, with the principles of Manual for Streets 2 formally incorporated into the reformed National Planning Policy Framework.

RECOMMENDATION 14

Planning requirements for new housing stock and workplaces should be conducive to facilitating social engagement – especially where health and mobility could otherwise be compromised.

RECOMMENDATION 15

Efforts should be made to mitigate the consequences of neglected maintenance (the so-called Broken Window effect), for example, by giving tenants and local groups greater freedom to take up short-term ownership of closed and vacant shop units.

4. Productive, Innovative and Creative Behaviours

Evidence was heard of the effects of the design of the built environment on innovation and communication in work environments and communities.

RECOMMENDATION 16

Government should establish a formal cost-benefit analysis of how design elements impact on behaviour in the built environment.

RECOMMENDATION 17

Government - in cooperation with spatial experts and the private sector - should work to ensure that employees have autonomy over their working environment. In particular, this should ensure that the design of office environments places emphasis on giving their workforce sufficient access to daylight, control of temperature, and fresh air.

5. The Housing Crisis

Finally, considerations are also made regarding the lack of affordable housing.

RECOMMENDATION 18

Local authorities should be encouraged to devote some of the additional resources available from the £25 million capacity fund and increased planning fees to procuring design advice and training for councillors and communities involved in planning new residential development.

RECOMMENDATION 19

House builders should be compelled to employ appropriately qualified urban designers, architects and landscape architects to ensure that schemes meet the highest standards of housing and neighbourhood design

INTRODUCTION

The Design Commission decided to carry out this inquiry following the lack of a decisive government response to the Farrell Review of Architecture and the Built Environment and a sustained body of work by the Commission for Architecture and the Built Environment (CABE), drawing attention to the impact of our built environment on the way we live. It takes account of the House of Lords Select Committee report 'Building Better Places' and largely endorses its recommendations.

Historically, policymakers at all levels have demonstrated an insufficient grasp of the significance of the influence of the built environment on individual and group behaviour. This has impacted negatively on achieving objectives across a wide range of policy fields: health, wellbeing, prosperity, security, environmental sustainability and social cohesion.

With the loss of CABE's research and campaigning functions in 2011, the subject's profile diminished but, increasingly, work is being done, most notably in the field of health and wellbeing. However, there is not yet a generally accepted understanding of the role of the design of the built environment in furthering policy. In particular, there is not enough research into this complex and multi-factorial field.

We took evidence from a wide range of experts and have set out a number of case studies which show what can be done. Our recommendations are aimed at central and local government and the private and third sectors.

The areas we found to be the most important to national policy were health and wellbeing, environmental sustainability, social cohesion and innovation and productivity. We deal with each of these in turn. We have added a section on housing, although it also forms part of the earlier sections, because the current crisis has brought this into sharp focus.

One of the factors inhibiting an overall clear focus has been a concern that by attributing causality for behaviour such as crime to the design of, for instance, housing estates, we absolve individuals for their responsibility for law-abiding behaviour. It is not our view that individuals lack agency, but we have been convinced by evidence that design makes some kinds of behaviour more likely than others.

National policy will now be conducted in the context of our exit from the European Union. Our regulatory regime will need to adapt to this and we will be working out what will change and what needs to be kept. This will be decided against a national background which includes an overweight and ageing population, different and less secure employment patterns, larger cities, perhaps more cities, an imperative to improve the quality of our environment set against continuing downward financial pressures on those who create buildings and places and who care for them.

Enhanced security may imperil our customary freedoms. If we want to maintain our values and keep strong communities, our capacity for innovation and creativity has never been more important.

So too with productivity.

The Government's recently published industrial strategy green paper paves the way for a massive transformation in the economic base of the nation.

However, ultimately success will depend upon the productivity of individuals and organisations. During evidence sessions we heard how design of the built environment affects creativity and innovation. The way we design our built environment could be one of our greatest strengths in navigating the course ahead.

We hope this report demonstrates how the health of a society is directly linked to the places its people inhabit. If we get this right, we can build a Britain that is healthier, happier and more productive.

Will this happen of its own accord? Not necessarily.

Here is an instance where the market must be supported by good government, both through demonstration and regulation, if the best outcomes are to be achieved.



Baroness Whitaker



Professor Alan Penn

Inquiry Co-Chairs

March 2017

1 HEALTHY BEHAVIOURS

The influence of the built environment on health and wellbeing has probably received the most positive attention in recent years. It is one of the most important examples of why policymakers should put it at the centre of government thinking, together with the role of design in effecting improvements.

The inquiry dedicated its first witness session to considering how the built environment affects health and well-being as there is historical precedent in legislating for health and wellbeing through design.

1.1. Health and wellbeing through design

Government policy in the 19th and 20th centuries, responding to increased public concern over the provision of clean water and emissions, was based on design such that of Joseph Bazalgette's improved sewage system, following John Snow's research into the transmission of cholera, and still used by us today. Despite differences of opinion over the definition of wellbeing, the boundaries of health policy have been expanded to include it since the 1946 World Health Organisation (WHO) constitution defined health as "*a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity*". As the Design Council stated, this definition is one that:

"...emphasises that people should enjoy the highest attainable standard of health, saying it is 'one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition.' The WHO's statement gives an egalitarian impetus to inform our approach to tackling health issues, one that is standard practice within clinical and health-related professions in the treatment of illness or infirmity. It also highlights the fact that health is about the whole person, mentally and physically, and touches on societal influences which we know affect health and health inequalities."¹

-Design Council, *Future Health*

Although wellbeing remains difficult to quantify and measure (and therefore create an evidence base), the consequent legislative trend towards grouping it with health makes it possible to indicate levels of public health in the round. In 2009, a report by the World Health Organisation, set-up to investigate the inequalities associated with public standards of living found that;

"The lived environment — urban settings, neighbourhoods, communities — are critical in that they can both promote or inhibit access to goods and services, social cohesion, physical and psychological well-being and the natural environment. Health related outcomes as diverse as obesity, depression and injury through violence or accident can all be linked to the way we live."²

-Commission on the Social Determinants of Health

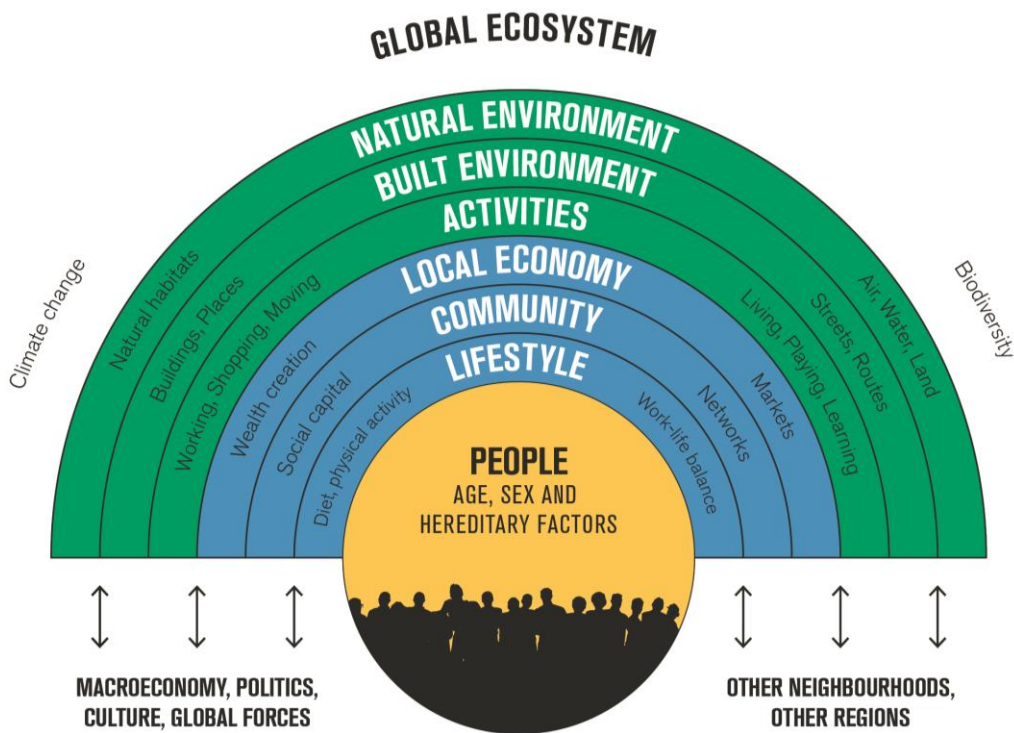
¹ CAGE, *Future Health*, 2009

² Commission on the Social Determinants of Health, *Summary of Evidence for the Review of Health Inequalities, Evidence from the Commission on Social Determinants of Health*, 2009, cited in CAGE, *Sustainable places for health and well-being*, 2009, (pg. 12)

This theme of the built environment as a major contributing factor to public health was reflected throughout submitted evidence. Dr Laurence Carmichael set out how much public health issues ranging from viral epidemics to asthma are, arguably more so than other elements of behaviour, directly linked to multiple factors within the built environment³. She gave detailed and compelling evidence about the association of car traffic noise with increased cardiovascular morbidity, about obesity and environments which make activity difficult, and about the impact of poor built environments, indoors and outdoors, on mental health.

Health map for local human habitat⁴

The Determinates of Health and Wellbeing in our Neighbourhoods



This was further developed by a study by Guite, Clark and Ackrill that drew research strands together regarding the relationship between the environment and mental well-being. They identified five environmental areas as being most likely in promoting a sense of well-being:

1. Control over the internal environment
2. Quality of housing design and maintenance
3. Presence of valued 'escape facilities'
4. Crime and fear of crime
5. Social participation⁵

³ Carmichael L., *Briefing for Design Commission*, 2015

⁴ Rao M., Mala S et al. *The built environment and health*, *The Lancet*, Vol. 370 (9593), 2007 (pg. 1112)

⁵ Guite H. F., Clark C., Ackrill G., *The impact of the physical and urban environment on mental well-being* *Public Health*, Vol 120, 2006, (pg. 1118)

The Commission for Architecture and the Built Environment (CABE) echoed the views of Dr Carmichael's and others in its comments on the WHO constitution:

“WHO’s statement gives an egalitarian impetus to inform our approach to tackling health issues, one that is standard practice within clinical and health-related professions in the treatment of illness or infirmity. It also highlights the fact that health is about the whole person, mentally and physically, and touches on societal influences which we know affect health and health inequalities.”⁶

1.2. Improving public health outcomes

However, air pollution and obesity – perhaps the most pressing public health issues of the present time – are not considered fully by policy-makers in the context of the built environment, despite the fact that urban areas are still built around the motor car and to facilitate the needs of those who drive, with only patchy measures to provide and encourage other methods of transportation. Air pollution in London accounts for up to 10,000 deaths per year⁷, while living near contaminated brownfield land increases the risk of poor health by up to 15%.⁸

In England alone, obesity and physical inactivity are both estimated to cost the country £2.5 billion and £8.2 billion respectively.⁹

Public health is a matter that affects all areas of government, influencing policy far beyond the Department of Health. Government should establish a dedicated Minister for State for Public Health, based in the Cabinet Office, with a committee structure that works across all departments to secure better environmental, transport and productivity outcomes.

RECOMMENDATION 1

Government should integrate and co-ordinate decision making for public health with the way in which this interacts with the public realm.

We also found that health inequalities are exacerbated by poor planning decisions within the built environment. As shown in the following graph from the Department of Communities and Local Government.¹⁰

⁶ CABE, *Sustainable places for health and well-being*, 2009, (pg. 7)

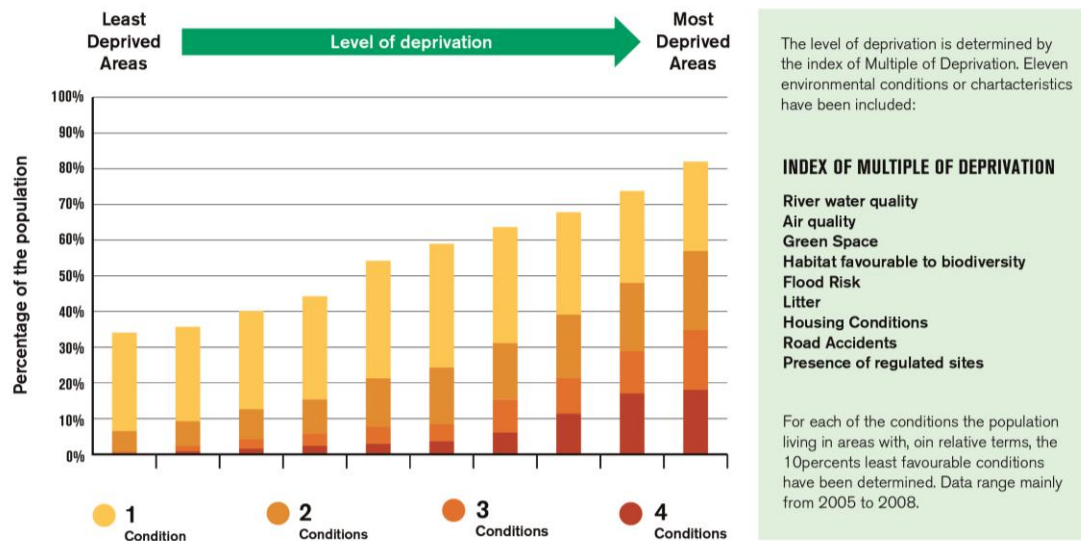
⁷ Walton et. al, *Understanding the Health Impacts of Air Pollution in London*, King's College London, 2015

⁸ C. Bamba et al. *Healthy land? An examination of the area-level association between brownfield land and morbidity and mortality in England* *Environment and Planning*, Vol 46, 2014, (pg. 433–454)

⁹ Natural England, *Headline Facts: The cost of obesity and physical inactivity*, 2009

¹⁰ GOV.uk, *English indices of deprivation*, (<https://www.gov.uk/government/collections/english-indices-of-deprivation>) [Recovered: Friday 17th March, 2017]

Least Favourable Conditions



Government therefore has several interests in improving public health outcomes by enabling changes in behaviour. There are also areas where local authorities and the private sector are better placed to incentivise public health outcomes by influencing the built environment. This said, central government still needs to set a lead.

During a number of witness sessions, the importance of government support for research into the built environment was reiterated. It is crucial here to reiterate that all publicly funded research in this area should continue to be allocated according to the Haldane Principle, that is, that decisions about research should be made by the research Councils rather than politicians. As Duffy¹¹ and others have noted, the Haldane Principle remains central to the workings of the Higher Education Funding Councils.

Although this was not discussed by either the Farrell Review or by the House of Lords Select Committee, this inquiry believes that government can do much more to facilitate research into the effects on the built environment on behaviour, although it may result in outcomes that go against or contradict current policy.

Government plays the central role in the British construction industry, either via direct procurement, or in promoting new developments. As such, it has an obligation to ensure that best practice and any matters arising from public-sector projects, especially those regarding the user habitat, are shared on an openly accessible platform for developers to learn from and contribute to.

With the formation of BEIS and the announcement of a new focus on industrial strategy, it is important that Ministers see the benefits of properly researching behavioural change emerging from the built environment, especially over a long period of time. Government should work to prioritise research in this area in line with the Haldane Principle.

RECOMMENDATION 2

As a major procurer of buildings and services, Government should play a lead role in encouraging high design standards and sharing best practice with the private sector. Ministers should co-ordinate the work of research councils to promote longitudinal studies into the built environment, especially post-occupancy evaluation and learning, as well as investigating long-term trends.

¹¹ Duffy, M.P. *The Rothschild Experience: Health Science Policy and Society in Britain*, Science, Technology, & Human Values, Vol. 11, 1986, (pg. 68-78)

1.3. Public health leadership for local authorities

Numerous submissions to the inquiry criticised the fact that no specific responsibility is given by central government to allow local authorities to adapt to the concept of what has been called 'active management' - namely, seeing the development and adaptation of new housing developments as a long-term investment by local authorities, rather than simply as something to be built and then handed over directly to tenants or the private sector. As the Prince's Regeneration Trust notes, the active management of a local authority's property portfolio is crucial for maximising economic, social and personal investment in an area¹².

Although elements of this have already been addressed with regard to the principle of post-occupancy, a crucial area of public health is handled locally, via various boards working under numerous statutory articles of legislation. In England, the primary vehicle for directing the work of these organisations is Public Health England, an executive agency of the Department for Health which was established by the Health and Social Care Act 2012. Similar bodies are in place in Scotland, Wales and Northern Ireland, although their day-to-day responsibilities and lines of accountability differ depending on jurisdiction.

Two witnesses in particular – Marcella Ucci of UCL and Laurence Carmichael of UWE – both suggested that an obvious way to combat public health problems which follow poor planning would be to strengthen the capacity for local authorities to improve the way in which Health Impact Assessments (HIA) are considered, as well as increasing the ability for local authorities to implement them.

The European Centre for Health Policy defines HIA as "a combination of procedures, methods, and tools by which a policy, program, or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population."¹³ Although they considered HIAs were an important element of public health, both witnesses thought they were not used properly:

*"The Health Impact Assessment is not really used at the moment day in and day out by local authorities, but if you look into the principle, it's democratic, it actually uses expert evidence; it can use public health evidence, evidence from planning experts and also from transport planning, from heritage, and also from local people using, living in local places, whether it's a building or a neighbourhood."*¹⁴

-Marcella Ucci, Lecturer in Environmental and Healthy Buildings, University College London

Drawing on this, it was clear to the inquiry that the governance of public health should be improved. There is a strong argument for ensuring that planners realise their role in terms of improving wellbeing as part of their overall remit. It is also easier to do than before. Now that many local authorities have reintegrated responsibility for public health, this can be organisationally linked to their control of the built environment. With public health teams increasingly based not only in the same building but directly alongside council planning teams, the opportunity to dramatically improve public health is now possible.

Additionally, as public health teams have begun to develop Joint Strategic Needs Assessment, data that has been gathered on public health matters such as obesity and ageing can now be brought into local planning decisions.

Dr Carmichael cited that this evidence should help form local development plans, based on a clear understanding of how planning interventions can change the behaviour of members of the public.¹⁵

¹² Prince's Regeneration Trust, *Planning for Sustainability: A Local Authority Toolkit*, 2014 (pg. 6)

¹³ ECHP *Health Impact Assessment: Main concepts and suggested approach*, European Centre for Health Policy, Brussels, 1999 (pg. 4)

¹⁴ Witness session into health and wellbeing, 20th October 2015

¹⁵ Carmichael L, *Briefing for Design Commission*, 2015

Health Impact Assessments should become a key element of the planning process. With more access to data visualisation, public health priorities can be increasingly used to direct the design process in order to promote healthy behaviours in the context of specific local issues.

RECOMMENDATION 3

Government should require Health Impact Assessments to be a material consideration in planning decisions on major developments.

Local authorities should give Health and Wellbeing Boards the capacity to bring together other areas of local government to promote the integration of services regarding public health matters within the planning system. Boards should be allowed to recommend decisions on planning applications depending on the extent to which they promote positive public health behaviours and decisions.

RECOMMENDATION 4

Health and Wellbeing Boards should be obliged to develop links across local authority structures to improve public health considerations in planning and other relevant decisions.

2 ENVIRONMENTALLY SUSTAINABLE BEHAVIOURS

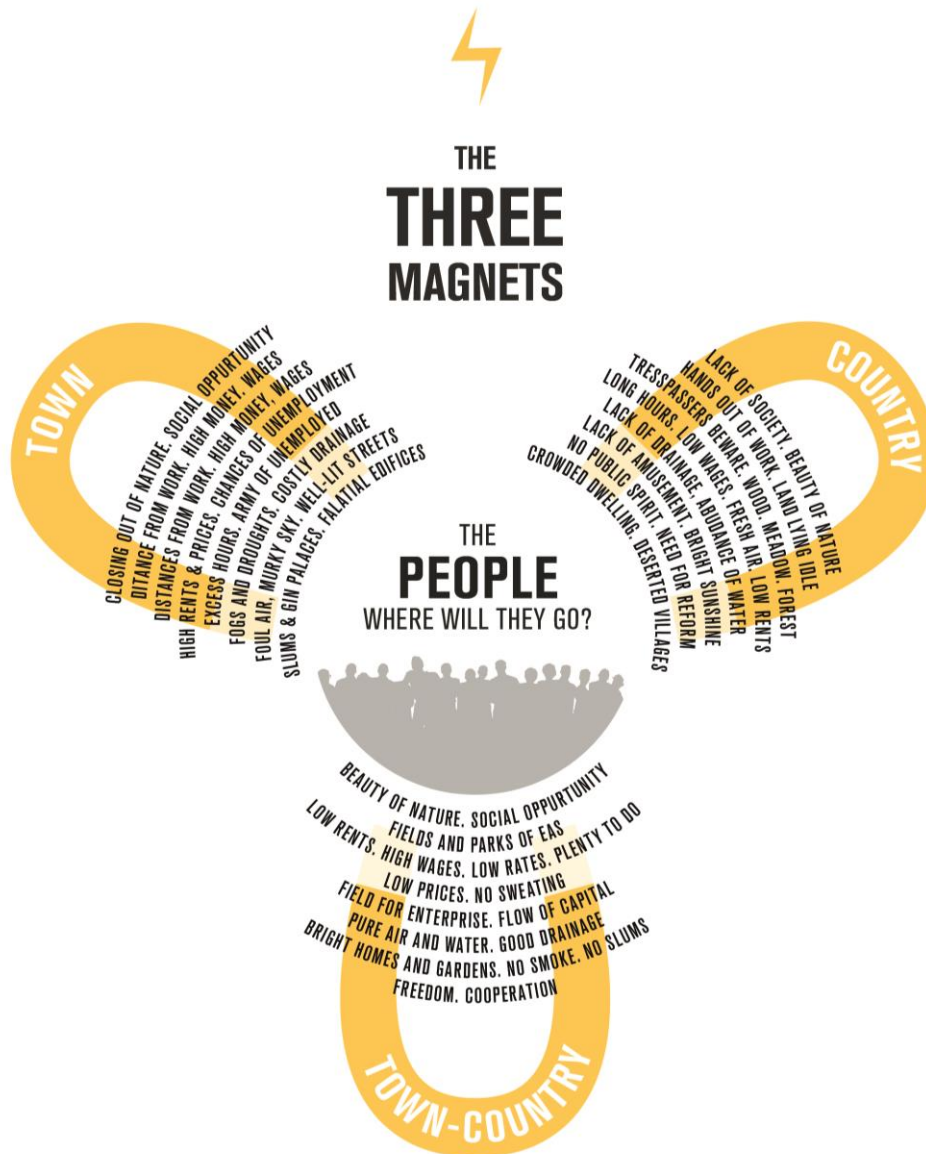
Although concern for global matters such as climate change has only really emerged as a topic of conversation since the end of the Second World War, interest in how the natural environment intersects with the built environment is a much older phenomenon.

2.1. The garden city movement

Sir Ebenezer Howard's famous manifesto "*To-morrow: A Peaceful Path to Real Reform*" was published to critical and popular acclaim in 1898, and was soon re-issued in a second edition entitled "*Garden Cities of To-morrow*".

Whilst written from a typical late-Victorian mentality, not least the view that the inner city would inevitably fall into decline, the principles and concerns underpinning Howard's vision are just as relevant today as they were over a century ago. His view that the mass overcrowding and environmental degradation of the urban realm contributed to an unhealthy and lethargic population could easily have served as evidence to this inquiry.¹⁶

¹⁶ Cited in Howard E, *To-morrow: A Peaceful Path to Real Reform*, 1898 Swan Sonnenschein and Co, (pg. 8)



The Garden Cities Movement is – naturally – a controversial view amongst planners, but its synthesis of how access green-space acts positively on behaviour acts as a perfect conduit to this report’s study of how to promote environmentally sustainable behaviours from how individuals interact with the built environment.

As day-to-day management of most green spaces, and the promotion of public health initiatives usually falls under the auspices of councils, it is worth placing the committee’s views on local authorities in context.

2.2. Local government today

Ultimately, all government is local. For some people - perhaps too many - the impact of their vote begins and ends with the council collecting their rubbish. With this in mind, it is curious that Britain has historically been the most centralised country in the western world, with cities and local authorities lagging far behind their OCDR contemporaries with regard to autonomy¹⁷. Despite the Cameron government’s legacy of so-called ‘City Deals’, the UK remains “one of the most centralised countries” in the OECD¹⁸, with little sign of a step-change taking place in the near future.

¹⁷ Centre for Cities, *Cities Outlook 2016*, (<http://www.centreforcities.org/reader/cities-outlook-2016/>) [Recovered: Friday 17th March, 2017]

¹⁸ Alexandra Jones, *Today*, BBC Radio 4, 27th January 2014

Over-centralised policy-making, a lack of flexibility in adapting standards, mixed perversely with an attitude of deregulation to the private sector has the risk of totally disrupting the ability of local authorities to build houses to the standards and specifications that people deserve.

The House of Lords has also cited this trend as a source of concern:

“The Government is pursuing a deregulatory agenda as seen, for example, in the introduction of more flexible arrangements for office to residential conversions and the strong policy emphasis placed on the financial viability of new developments. These changes, however, have the cumulative effect of progressively diluting the capacity of local authorities to scrutinise new developments, to safeguard quality and sustainability and to ensure that proposals contribute to an overall and beneficial sense of place.”¹⁹

-*Building Better Places*, House of Lords

However, local government responsibilities for the built environment do not begin and end with housing development. The Local Government Association notes that council authorities across England are responsible for over 700 individual services, representing the vast majority of elements of the built environment that people interact with on a daily basis. Local authorities in one guise or another are responsible for the vast majority of roads, which constitute 80% of the entire public realm²⁰.

¹⁹ House of Lords, *Building Better Places*, 2016 (pg. 3)

²⁰ Partnership for Active Travel Transport and Health, *Written Evidence to House of Lords Committee on the Built Environment*, 2014

The services provided by borough, county and metropolitan councils that directly impact the built environment include:

2.3. Local authority responsibilities for the built environment

PRINCIPAL SERVICE ²¹	INCLUDES
Highways, roads and transport	Highways – non-trunk roads and bridges Street lighting Traffic management and road safety Public transport – discounted travel schemes and local transport coordination Airports, harbours and toll facilities
Housing	Social housing Housing benefit and welfare services Homelessness Housing strategy
Cultural Services	Culture and heritage, including archives and museums and galleries Recreation and sport, including facilities and sports development Open spaces – parks and playgrounds, the countryside and allotments Tourism – visitor information, marketing and tourism development Libraries and information services
Environmental Services	Cemetery, cremation and mortuary services Community safety – including consumer protection, coastal protection and trading standards Environmental health – including food safety, pollution and pest control, public toilets Licensing – including alcohol, public entertainment, taxis Agricultural and fisheries services Waste collection and disposal, recycling and street cleaning
Planning and Development	Building and development control Planning policy – including conservation and listed buildings Environmental initiatives Economic and community development

These responsibilities tie into a common perspective, despite some positive steps in the right direction with regard to devolution; local authorities have too much responsibility with too little power. Councils have always played a crucial role in developing a built environment that works for local communities, be they urban, rural or suburban. Since the passage of the Town and Country Planning Act 1947 and the Housing Act 1949, local authorities have been tasked with developing plans that set out proposals for allocating development and facilitating planning applications²².

Laura Vaughan noted that the Act itself often failed to properly account for how behaviours could converge in development areas of varying classifications. South Oxhey and Borehamwood, two outer London neighbourhoods designed according to two entirely different Housing Manual standards nevertheless continue to suffer from levels of social deprivation which differ only negligibly²³. This legislation was very much of its

²¹ Local Government Association, *Local Government Structure Overview*, 2010

²² HM Government, *Town and Country Planning Act 1947*, Part II

²³ Vaughan L. *Submission to the Design Commission*, 2015

time, with the concerns of the Attlee Government very different to those of today. Whereas the aforementioned Acts were concerned with rebuilding from the devastation of the Second World War and accommodating the great exodus from the inner cities²⁴, today's legislative programme is concerned far more with addressing the concerns associated with greater demand for housing in urban areas, especially in London and the South-East of England.

2.4. The devolution agenda and built environment

With this in mind, it is clear that the relationship between government and local authorities demands reconsideration. Various witnesses noted that the Localism Act 2011 has actually served to reduce the level of information available to planners and developers by scrapping the Annual Monitoring Report, the statutory requirement to share progress on various areas such as public transport, built environment and planning, with the DCLG.

Given how much impact these areas have on behaviour, this report finds that action is needed to ensure that local planning decisions are made with access to the highest level of information possible. This, when coupled with the oftentimes poor to non-existent level of design literacy of many local authority leaders – as highlighted in the Farrell Review²⁵ – shows that there is a clear need for Whitehall to develop a new approach to development in consultation with local authorities. With the new government's devolution agenda yet to be determined, the inquiry feels that it is an opportune time to do this.

The Department for Communities and Local Government should develop a new framework to increase the knowledge base of local authority leaders, and to promote information sharing at all levels, this can be achieved via bilateral meetings, developing new partnerships between councils and the private sector, and engaging with universities and neighbouring authorities to share examples of ways in which the planning system can impact behaviour

RECOMMENDATION 5

Local authorities should ensure adequate capacity in the planning system – working in the context of localism, devolution, and elected City Mayors – to ensure that best practice is followed when considering the design, construction and future management and maintenance of the built environment in new developments.

This is not to say that local government's capacity to promote environmentally sustainable behaviours is entirely lacking. As one witness noted:

“I think in the UK we are in some ways streets ahead of some of our European counterparts. [...] It's working in partnership – again, relatively new for some European countries – decision-making based on partnership and community engagement and a design process which incorporates management from the outset, and that sort of thing that I think we should be aspiring to.”²⁶

- Nicola Dempsey University of Sheffield

As a study by Daniel Metz on London's traffic showed, there has been a consistent decline in automotive travel since the mid-1980s.²⁷

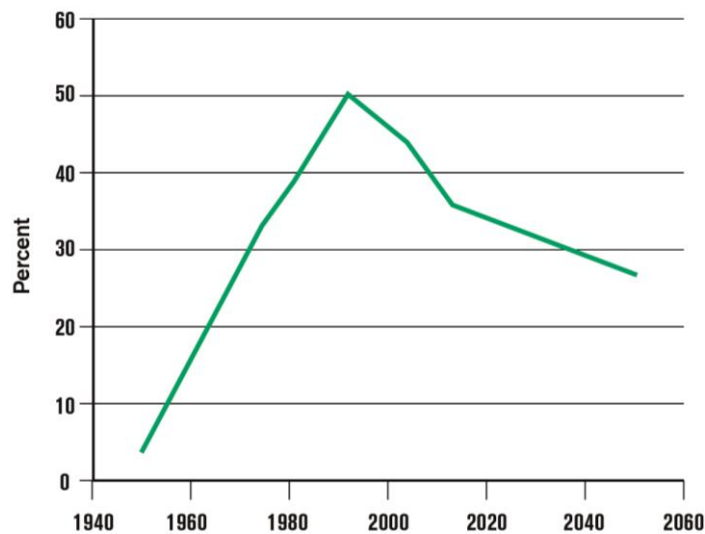
²⁴ Greater London - like many British cities - has only just surpassed its previous peak population, which was set in 1939

²⁵ Farrell Review, *The Report on the Consultation*, 2014, (pg. 63)

²⁶ 26th January 2016 - witness session into housing and neighbourhoods

²⁷ Metz D. *Peak Car in the Big City: reducing London's transport greenhouse gas emissions* Centre for Transport Studies, University College London, 2015 (pg. 3)

Share of journeys by car in London 1950–2050



There are clear examples of how devolution is starting to positively impact behaviour and quality outcomes. Over the past twenty-five years, despite seeing its population grow to a record high, London has actually see a noticeable decline in the share of journeys being made by car. Car journeys have fallen from 50 per cent of all trips in 1990 to 37 per cent today²⁸. Although not wholly responsible, the leadership afforded by the Mayor of London over public transport, record levels of investment in schemes such as Crossrail and London Overground, and initiatives such as the Congestion Charge and the Ultra Low Emission Zone have all served to change people's habits, without any noticeable impacts on economic growth.

David Metz's paper projects that – even with London's population projected to grow - the share of trips by car as a percentage of all journeys being made in the Capital could fall to 27 per cent by 2015. Other initiatives, such as freeing-up TfL's property portfolio to allow new housing developments around Underground stations, the pedestrianisation of Oxford Street, and an increase in segregated cycle lanes all have the potential to lead to a key behavioural shift in how citizens interact with their surroundings and the built environment. As a recent study noted:

“In the long run, the built environment can also influence the location choices of households and businesses, and consequently, their travel decisions. Last but not least, land use dynamics can also have a less immediate and more indirect effect on travel behaviour through their impact on activity-travel attitudes over time.”²⁹

Outside London, the expansion of Manchester's tram network, initiatives such as Rail North and proposals to return buses to municipal control all indicate that this shift will continue. However, more can still be done. Nicholas Falk of URBED noted that – even with positive examples such as the renaissance of central Birmingham spearheaded by the development of a pedestrian-focused urban realm around the Bullring - Britain lags behind most of continental Europe with regard to the quality of the urban realm³⁰. In his written evidence to the inquiry, he stated that:

²⁸ *Ibid.*

²⁹ Zhang L. et. al. How built environment affects travel behavior: A comparative analysis of the connections between land use and vehicle miles traveled in US cities *The Journal of Transport and Land Use*, Vol 5 Ed 3, 2012 (pg. 41)

³⁰ See also – paragraph 3.3

“One general excuse is that there is no money available for the public realm in the UK. Certainly British levels of investment are very low compared with Continental countries. In France towns and cities compete to be more attractive, and invest in trams, for example, using the Versement Transport, a charge on employers. Mayors get elected on producing tangible results, and have much more flexibility.”³¹

-Nicholas Falk, URBED

Clearly, more can be done. In their 2015 report, the Royal Academy of Engineering noted that New York, not a city traditionally associated with having a good public realm for pedestrians, had achieved numerous successes in promoting physical activity following the establishment of the Centre for Active Design.

Based in New York, CAD has spearheaded contemporary American urban planning by bringing together a collaborative space for planners, architects and members of the community to work with local government to develop a built environment that promotes environmentally sustainable behaviours, especially through pedestrian and cycling incentives³².

The development of the High Line in Manhattan is an archetypal example of this, and influences the view how the inquiry considered the matter and bore out the following recommendations.

Councils and elected Mayors should work to development the statutory planning system to improve the quality of design for all publicly-funded projects in the built environment. This can be achieved with the development of design frameworks and collaboration with local designers, architects and universities to create centres that work to develop design principles that are specifically designed around local needs and demands.

RECOMMENDATION 6

Local authorities should set minimum design standards to access to public transport infrastructure and the public realm when making planning decisions.

Public health outcome frameworks should be used to specify a set target of green infrastructure to promote walking and cycling over other modes of transport, in line with the recommendations of Cycling UK's to increase investment in cycling to £10 per person annually as a means of raising cycle use to 10% of trips by 2025, and to 25% by 2050.³³

RECOMMENDATION 7

Targets should be set for the promotion and provision of pedestrian and cycling infrastructure in local authority development plans.

2.5. Biodiversity

The inquiry also considered policies with an aim of promoting environmentally sustainable behaviours concerns that of biodiversity. The Commission received numerous submissions on this matter, with a substantive contribution from Professor Catharine Ward Thompson of the OPENSspace Research Centre at the University of Edinburgh, noting how policy-makers in the built environment can have a substantive role to play in terms of using biodiversity to promote both environmentally sustainable and socially cohesive behaviours³⁴.

The final recommendation in this section, therefore, concerns how to substantively improve greenspace. A report by a central London Borough states that *“the built environment has a crucial role to play in supporting*

³¹ Falk N. *Submission to the Design Commission*, 2015

³² Royal Academy of Engineering et al, *Built for Living: Understanding Behaviour and the Built Environment through Engineering and Design*, 2015, (pg. 34)

³³ Cycling UK, *Get Britain Cycling*, 2013

³⁴ Thompson C. W. *Submission to the Design Commission*, 2015

and enhancing biodiversity, especially in dense, urban areas such as Islington.”³⁵ This is a view that this inquiry agrees with.

Developers, public or private, should aim to both protect existing biodiversity and promote it further wherever possible. Even when native habitats are not directly threatened, biodiversity should be placed at the centre of planning concerns. Trees in particular have a clearly positive impact on the wider environment and when they must be chopped down, mature replacements must be planted nearby, on a two-for-one basis.

RECOMMENDATION 8

Biodiversity should be placed at the heart of all new developments and public places, including adopting a replacement ratio of 2:1 when and where mature trees are felled as part of local authority works or planning permission approvals.

2.6. Improving energy efficiency

The final recommendations in this section reflect the evidence given on Climate Change that linked behaviour and design to productivity and the reduction in waste. There is long-standing evidence such as the PROBE Studies (1995-2002) that building performance does not match the design intent as a result of poor design and over-complicated controls, compounded by our behavioural response to environmental conditions.

The ever-tightening Building Regulations for energy and the extensive modelling they require are now leading to regular over-heating in new homes. Meanwhile ineffective controls and management are causing widespread frustration and discomfort in many offices, leading to reduced productivity.

The mandatory Display Energy Certificates (DEC) for public buildings had a transformative effect and could usefully be extended to all workplaces over 500 m² - indeed, this had been cited by the then-Chancellor, George Osborne, as early as the Autumn Statement in 2010.

Meanwhile the Australian NABERS system of voluntary measurement of actual base energy use and designing to meet this has seen a reduction in energy use in better buildings of up to four times. Since the UK property market works differently it may prove difficult to replicate this directly, however there is a huge opportunity to reduce energy and improve productivity.

With the Public Sector responsible for 40% of construction, it is clearly in the public interest for the public sector to show the way with new build. However with the increasing need to make better use of the buildings we already have, the use of DEC's for all workplaces including existing estates should be introduced immediately.

RECOMMENDATION 9

Regulations concerning energy use and air quality should move rapidly from one of model-based compliance to one of measured performance-in-use with full disclosure.

³⁵ Islington Council, *Biodiversity in the Built Environment: Good Practice Guide 4*, 2016 (pg. 2)

In addition to this, we recommend a much wider level of energy literacy throughout the construction industry and recognition of the importance of appropriately qualified facility managers.

RECOMMENDATION 10

Given the almost universal difficulty of operating buildings in the manner that was anticipated, a Royal Commission or Select Committee inquiry should be established to explore the mismatch between design intent of control systems and their operability and associated aspects.

Further, in the interests of sustainability, it is also vital that developers and local authorities take advantage of recent breakthroughs in the big and open data agenda, especially with regard to the internet of things, to help people alter their behaviour to reduce demand for energy.

In addition to this, in the interests of sustainability, it is also vital that developers and local authorities take advantage of recent breakthroughs in the big and open data agenda, especially with regard to the internet of things, to help people alter their behaviour to reduce demand for energy.

The internet of things, amongst other incentives, has the potential to dramatically change how individuals approach energy use. By further increasing access to smart metres and the resulting data, individuals have the ability to gain far more knowledge regarding their consumption habits, and ways to reduce their energy use.

RECOMMENDATION 11

In order to facilitate demand reduction for energy, Government should commit to make full use of smart meters and the internet of things to track trends across the general energy network.

3 SOCIALLY COHESIVE BEHAVIOURS

The question of under what conditions – and in what ways – the built environment influences social cohesion was the focus of a good deal of evidence. This chapter refers to the ways in which individuals within a community or neighbourhood connect to and cooperate with each other and was the hardest aspect of the enquiry to conclusively ascertain.

3.1. Defining social cohesion and neighbourhood

the difficulty in answering the above question was largely due to the methodological challenges of measuring and evidencing such a relationship and the complexities of relationships between places, cultures and people that mean identifying specific determinants is immensely difficult. Indeed, evidence cited warnings urging the avoidance of deterministic links between environments and behaviour in favour of a probabilistic or associative set of relations.³⁶

Dempsey further defined social cohesion as “the ongoing integration of the individual behaviours in a social setting”³⁷ As a basis of her research; seven dimensions were identified as antecedents of social cohesion:

1. Social interaction
2. Social networks
3. Sense of community
4. Participation in organised activities
5. Trust and reciprocity
6. Perceived safety
7. Sense of place attachment

The inquiry decided to focus on how the design of neighbourhoods influences individual behaviour, particularly the ways in which residents perceive or make use of shared or public spaces and infrastructure, and thus encounter each other within these.

Professor Nicholas Temple of the University of Huddersfield has written extensively on the the question of ‘civicness’ in the contemporary city, and the alienating effects of many aspects of modern corporate life on civic participation.³⁸

³⁶ Dempsey N, *Are good-quality environments socially cohesive? Measuring quality and cohesion in urban neighbourhoods*, *Town Planning Review* (Vol. 8 (3), 2009, (pg. 323)

³⁷ *Ibid* (pg. 321)

³⁸ Temple N, *Rites of Intent: The Participatory Dimension of the City*, *Cityscapes in History: Creating the Urban Experience*. London, 2014, (pp. 155- 177)

Many evidence submissions, across both academic and professional disciplines, touched on this theme, with specific reference to estate management, crime and safety, to interaction between neighbours, and to the perceived negative impacts of poorly-conceived urban planning, particularly in the 1960s and 1970s as well as to poor or absent maintenance.

While submissions differed on specifics, when considered as a whole they led the inquiry to broadly concur with the Place Alliance, who gave evidence submitted to the House of Lords Select Committee on National Policy for the Built Environment³⁹ – that there are five characteristics of successful local places. They are:

- **Friendly** (open, cherished and characterful)
- **Fair** (inclusive, healthy and low impact)
- **Flourishing** (adaptable, dynamic and diverse)
- **Fun** (vibrant, playful and stimulating)
- **Free** (safe, accessible and democratic)

The inquiry further defined the following elements as crucial to a built environment that seeks to promote social cohesion:

- High connectivity
- Mixed-use and inclusive, diverse neighbourhoods
- Land with clearly marked purpose
- Proximity to public transport
- Well-designed pedestrian and cycling facilities
- Parks
- Architecture and infrastructure that are sympathetic to local character

In addition to these, the Commission also felt to include the following:

- Ongoing maintenance and care of both the built and natural environment (good ‘place-keeping’)
- Attractiveness
- Legibility
- A strong character
- High density neighbourhoods

Dempsey submitted:

“A key finding to highlight here was the strong statistical association I found between the perceived quality of the built environment – particularly the extent of greenery and the perceived attractiveness of a place both as defined by the residents themselves, as well as perceived level of maintenance – and indicators of social cohesion. In this way, the better the perceived quality of the neighbourhood, the more likely that residents are positively socially interactive (related to, for example, their sense of attachment to the place, their levels of social interaction, feelings of safety and belonging).”

-Dr Nicola Dempsey, Senior Lecturer, University of Sheffield

³⁹ Place Alliance, cited in House of Lords, *Building Better Places*, 2016 (pg. 7-8)

It is clear that there are no easy formulae, leading the enquiry to believe that commitment to localism is essential, with decisions about land use and the built environment made as far down the governance ladder as possible, and wherever possible involving communities themselves. As Dr Laurence Carmichael stated:

“Any evidence ... is actually set within a context. We might actually have a lot of evidence from the States or from Australia or even from some place in the UK, but do they actually apply to the local contexts? Evidence found in Glasgow, does it actually apply in Bristol?”⁴⁰

-Dr Laurence Carmichael, Senior Lecturer, WHO Collaborating Centre for Healthy Urban Environments, Faculty of Environment and Technology, University of the West of England

Reinforcing this message, Dempsey’s research found that residents’ perceptions of where they live were important indicators of social cohesion, noting that “those features which were consistently associated with social cohesion tended to be dependent on residents for their measurement, indicating that to divorce the physical from the social environment is inappropriate.”⁴¹

This was further echoed by witness Dr Elanor Warwick, discussing the re-modelling of existing housing estates, an area in which she has expertise as both practitioner and academic:

“You only really know what bit of the design to tweak when you know what you’re dealing with. This kept getting repeated by colleagues [at Affinity Sutton housing association]: “In this situation this is what we felt and found worked; in this situation this is what we found worked.” So, when you ask the really simple and very sensible question: [...] “What are the positive ways that design can influence behaviour, my question would be “Okay, it depends where? It depends on who we’re dealing with, it depends on the particular situation.”⁴²

-Dr Elanor Warwick, Head of Strategic Policy and Research, Clarion Housing Group

3.2. Accessibility

Where more general conclusions can be drawn, these tend to be with regard to the specifics of health and the extent to which the built environment caters to those with specific physical needs or concerns. The inquiry noted a submission by Gillian Kemp, whose work on the accessibility to public toilets contextualised the inclusive elements of design on behaviour. Since 1990 over 40% of public toilets have been closed, with more under threat. Moreover, the submission noted that it is increasingly the case that housing estates, shopping centres, park areas and transport systems are being built without toilet facilities.⁴³ For many years, the planning process has not included the provision of toilet access, resulting in changes of behaviour amongst many people. Many people who require access to public toilets, such as older people, people with medical complaints and families with young children, increasingly feel left out of the public realm.

⁴⁰ Witness session into health and wellbeing, 20th October 2015

⁴¹ Dempsey N, *Are good-quality environments socially cohesive? Measuring quality and cohesion in urban neighbourhoods*, *Town Planning Review* Vol. 8 (3), 2009, (pg. 340)

⁴² Witness session into Housing and Neighbourhoods

⁴³ Kemp G, *Submission to the Design Commission*, June 2015

In a similar vein, Living Streets noted how the design guidelines for street crossings involuntarily discriminate against many elderly users:

“The design of crossings are set down in formal Department for Transport guidelines. This includes guidelines on how long to allow the pedestrian phase for the length of the crossing. Studies of health show that this time is inadequate for many older people who are physically unable to walk as fast as the standard. Living Streets supports the campaign to allow more Time to Cross. 76% of men and 85% of women over 65 cannot walk at the expected 1.2m per second. There are technological advances that could adapt the crossing experience for individuals.”⁴⁴

-Living Streets

These issues are, of course, not illegal. However, it is clear that, the inquiry notes that in a political climate where local authorities are operating in a period of increasing financial restraint⁴⁵, many local authorities have made decisions that – whilst saving money in the short term – may serve to harm the long-term economic health and social capital of urban centres across the country.

These bodies should be established that consider how behaviours have been changed by the design of the built environment as a result of funding shortfalls. In particular, these boards should investigate if people with health conditions are adversely affected by changes to service provision, including streetscape, access to public conveniences and pedestrianised areas.

RECOMMENDATION 12

Local authorities should appoint bodies that work to develop the principles of an inclusive built environment that does not discriminate against users and use a scrutiny process to ensure that design works for everyone.

3.3. Design at the heart of the high-street

Recent years have seen a great deal of interesting and innovative research undertaken on energy efficiency and how buildings can be better utilised. There is a growing market for intelligent use and monitoring of energy – entirely a design challenge (related to indoor environments, the internet of things). This is in addition to current demands to reach a low-carbon environment, migrating and adapting to the demands of climate change and the promoting and integration of green infrastructure and transport. Although this line of study was outside the remit of this Inquiry, it nevertheless influenced the thinking of how people interact with the street scape, especially their relationship with roads, private vehicles and the high-street.

Nicholas Falk provided invaluable research in this area⁴⁶ (see also section 2.2). Despite efforts to increase the use of public transport and a slight fall in private vehicle miles at the start of the Great Recession, car ownership in the UK has continued to increase⁴⁷ whilst bus use has fallen⁴⁸.

As noted in the previous chapter, car use and its impact depends not only on personal circumstances, but also on how easy it is to access an individual's car and park it at the end of a journey. If cars are parked in the street or grouped together at the end of a street and not in individual drives, owners will be more reluctant to use

⁴⁴ Living Streets, *Submission to the Design Commission*, 2015

⁴⁵ The Local Government Association notes that funding for local authorities has declined by 40% since 2010

⁴⁶ See also – paragraph 2.4

⁴⁷ Department for Transport, *Road Use Statistics in Great Britain for 2016* (pg. 12)

⁴⁸ BBC News, *Bus use falls across two-thirds of English councils*, 9th January 2016

them for short trips, which account for the great bulk of car use such as going to the shops. Dr Falk singled out Hampstead Garden Suburb as an example of how lessons can be learnt as to how to use an effective streetscape, contrasted with a modern housing estate.

In a similar way, car speeds are affected by the design of streets and roads. Many schemes which were criticised in CABE Audits were largely the result of local authority transport planners over-ruling designers. According to the *Manual for Streets*, British road widths are generally 15 per cent wider than their German equivalent. Single lanes are rarely allowed on the grounds of access for municipal vehicles, while bumps are still used for traffic calming instead of more complex arrangements such as 'bump-outs' with trees in them.⁴⁹

This is an inquiry about design, and where areas such as the streetscape are involved, bad street design kills. In a 2008 report for CABE, Dr Jake Desyllas speaks of how an ongoing design failure for the built environment concerns traffic engineering that put cars first and subordinates all other road users, including pedestrians. Despite nominally being placed under the auspices of safety and congestion relief, Dr Desyllas cites the sobering reality that streets are becoming less safe for people who use other modes of transport: He notes that the chances of children between 10 and 14 dying on the roads doubled between 1955 and 1990⁵⁰. Adding to this the issue of obesity and cardio-vascular disease consequent on a sedentary lifestyle and pollution that leads to respiratory diseases, the case for redressing the balance of power away from highways engineering solutions towards good design of shared streets and spaces accommodating a range self-propelled modes of transport moving at a slow pace, is overwhelming.

Despite strict Government regulation and guidelines, the fact remains that many private housing estates and streetscapes are still priorities for car use, rather than pedestrian transit. As Living Streets notes:

“The design of crossings are set down in formal Department for Transport guidelines. This includes guidelines on how long to allow the pedestrian phase for the length of the crossing. Studies of health show that this time is inadequate for many older people who are physically unable to walk as fast as the standard. Living Streets supports the campaign to allow more Time to Cross. 76 per cent of men and 85 per cent of women over 65 cannot walk at the expected 1.2 meters per second. There are technological advances that could adapt the crossing experience for individuals.”

-Living Streets⁵¹

This inquiry does not set out to dismiss private car use, or even call for a substantive redesign of existing streetscapes, but for Government to continue to develop a better spatial policy between the individual and road spaces.

The development of *Manual for Streets 2* in 2010, which extended the principles to roads in commercial areas as well as residential ones, was welcome but more needs to be done.

All streetscapes in residential areas, as well as commercial areas with high footfall, should focus on ensuring safety and comfort for pedestrians. Additionally, efforts to improve air quality should form part of all future developments, especially with regard to facilitating better access to public transport and prioritising pedestrian and cycle ways.

⁴⁹ Falk N, *Evidence to the Commission*, 2015 (pg. 2)

⁵⁰ Desyllas J, *The cost of bad street design CABE: The Cost of Bad Design*, 2008 (pg. 33)

⁵¹ Living Streets, *Response to the Design Commission*, 2015 (pg. 5)

RECOMMENDATION 13

New developments should be built around a “foot-first” approach that prioritises the individual user over private vehicles, with the principles of Manual for Streets 2 formally incorporated into the reformed National Planning Policy Framework.

Control over internal environments can be summarised simply as “*I don’t like what it looks like here!*” Other common issues that harm social engagement were summarised by Mae Architects as:

- Overcrowding
- Dissatisfied with open spaces and communal facilities
- Fear of crime and harassment
- Excessive noise and exposure to noise⁵²

Mae Architects also cited a recent study by the World Health Organisation relating to quality of amenity:

“The influence of indoor climate, light and the number and quality of green areas on well-being and diagnosed health problems as fatigue and hypertension is noteworthy, as is the strong influence of housing satisfaction on well-being.”⁵³

-World Health Organisation

3.4. Developing the built environment to improve social participation

Central to all of this is a need to ensuring that housing and neighbourhood design facilitates actual opportunities for social participation, with many residential and workplaces not being conducive to allowing for people have to have most basic of social interactions. Central to this inquiry is the design aspect granting people the opportunities that enable people to see who they’re talking to, getting together and having the stimulus or prompt to engage with work colleagues or neighbours. Good design policy is about helping to develop a sense of ownership between private individuals, and engagement is not just about looking after a place, it is about getting to know people and develop that sociability.

All housing stock and new workplace environments should be developed around a sense of helping to develop a sense of community by safeguarding meeting places that are conducive for social interactions, shared spaces should be incorporated into all developments that are comfortably lit and safe.

RECOMMENDATION 14

Planning requirements for new housing stock and workplaces should be conducive to facilitating social engagement – especially where health and mobility could otherwise be compromised.

The inquiry also considered the role of the high-street.

The traditional town centre remains are core part of national and regional economies - creating jobs, providing goods and services and promoting new businesses and start-ups. In 2015, a study by Geofutures and reported that town and city centres are worth more than half a trillion pounds to the UK economy⁵⁴.

⁵² Mae Architects, *Submission to Design Commission*, 2015

⁵³ W.H.O Regional Office for Europe “*Large analysis and review of European housing and health status (LARES)*”, 2007 (pg.18)

⁵⁴ Association of Town and City Management, reported in HM Government. *Government Response to the Report of the House of Lords Select Committee on the Built Environment*, 2015 (pg. 16)

As noted by various studies, changing technologies and patterns of retail behaviour do pose a significant challenge to Britain's high streets. The Government has recognised the significant structural challenges facing town centres and commissioning the independent Portas Review was welcome⁵⁵, as is the Government's commitment to helping stores and other commercial outlets adapt to modern consumers, who are increasingly making use of internet shopping and mobile phone apps for many of their day-to-day purchases.

The Design Commission ultimately embraces developments in technology and digital innovation and respects the fact that – in a free market – certain traditions will become unviable. Despite this, more needs to be done – government is keen to tout certain statistics:

Despite challenging economic circumstances, there are signs that high streets are starting to recover. Recent data is showing positive footfall trends in most locations and the national vacancy rate is also now at a level not seen since December 2009. Investment in high street property is also up 30% in the last year⁵⁶

-HM Government, Government Response to the Report of the House of Lords Select Committee on the Built Environment

However, it is clear that many high-streets, especially outside London, are still underperforming since the financial crash (and, whilst speculative, it is unlikely that Brexit will improve matters). At this stage, forcing yet further regulatory burdens on SMEs would be wholly negative, and it is therefore the recommendation of this inquiry therefore being a broad-based suggestion to improve the health and accessibility of Britain's high streets.

Professor Catharine Ward Thompson of the University of Edinburgh noted how changes to the physical environment are a necessary but not sufficient condition for behaviour change. Although environmental change, the behaviour change is very unlikely to happen, but certain community and/or individual-level social interventions are also necessary to effect behaviour change.⁵⁷

This is effectively a development 'broken window' syndrome. Closed shopfronts breed a negative effect, which damages consumer confidence, which reduces shop takings, and so on. Although at a time when business rates are an increasingly important element of local government finances this type of tax break is inadvisable, there is a case for reducing excessive paperwork for the occupation of vacant retail lots.

Although this inquiry has focused on design, it received evidence that the care of the built environment, once in use, also has an impact on behaviour. Nick Johnson provided a private sector example based on the revitalisation of Altrincham Market and its environs in Greater Manchester by 'curating' the place. This pointed to the importance of well-managed, maintained and promoted places in encouraging economic activity and pro-social behaviour.

Research at Queen Mary, University of London has shown the negative impact on mental health of failing to care properly for neighbourhoods. Pressure on local authority budgets continues to grow. Not all private companies understand the importance of active care for the whole built environment. It is important to build a common understanding that this is a shared responsibility. No matter how well designed a place may be, neglecting its aftercare will lead to antisocial behaviour and environmental damage.

Government and local authorities should work to improve relations with property owners who have been kept out of discussions regarding the health of the high-street by developing existing relationships such as Business Improvement Districts. Units that are currently vacant should be treated as a priority for reoccupation or – where required – closure and redevelopment for other zonal uses.

⁵⁵ HM Government, *The Portas Review: An independent review into the future of our high streets*, 2013

⁵⁶ HM Government. *Government Response to the Report of the House of Lords Select Committee on the Built Environment*, 2015 (pg. 16)

⁵⁷ OPENspace Research Centre, *Response to the Design Commission*, 2015 (pg. 1-2)

RECOMMENDATION 15

Efforts should be made to mitigate the consequences of neglected maintenance (the so-called Broken Window effect), for example, by giving tenants and local groups greater freedom to take up short-term ownership of closed and vacant shop units.

4 PRODUCTIVE, INNOVATIVE AND CREATIVE BEHAVIOURS

Britain's productivity crisis is already well documented. The paradox of rising employment and falling output has been studied since the 1950s and it is not within the remit of this inquiry to add to the weight of economic study. However, given the nature of attainment and achievement in places of work and education, and how they are measured, there is substantial evidence which gives some shape to the relationship between the built environment and productive behaviours.

4.1. How the built environment affects productivity

Substantial evidence emerged that supports a relationship between the built environment and productive behaviours. In this context, various witnesses noted the wide and unprecedented range of data now available to public sector agencies with a potential to greatly influence productivity – and the importance of developing a cost benefit analysis in relation to any new development that takes into account the financial gains of productivity increases when set against building investment.

“Architecture is more than the art of constructing individual buildings. It is also the creation of environment. Buildings do not exist in isolation. They not only impose their character on their surroundings but also have an incalculable effect on the lives of human beings who inhabit them.”⁵⁸

-Flavio Conti, *Architecture as Environment*

Quantifying this information can be considered in a number of ways. Although cost-benefit analysis in the context of personal output has played a role in the public sector since the 1980s⁵⁹, architects and designers now have access to more information than ever before. Various witnesses noted the wide range of data

⁵⁸ Conti F, *Architecture as Environment*, Harcourt, 1978

⁵⁹ Ahren, P: *The Economics of Choice: Built Environment Design and Building Materials Use*, 1985, (pg. 1)

available to public sector agencies - such as through Transport for London's wealth of passenger analytics – and this consequently has the potential to greatly influence productivity.

In their report on smart cities, the legal firm Osborne Clarke said that “data needs to be treated as an asset, not a risk”⁶⁰. With proper safeguards, councils and other public sector bodies having proper access to big data would give them the capacity to be much better placed to coordinating the development of a healthy streetscape, good signage, and efficiently designed public-realms.

Our evidence included research on higher attainment levels in schools as well as more familiar work on the relationship of sickness absenteeism, retention rates and better performance on the job to factors in the built environment, including control of aspects of the environment. Professor Derek Clements-Croome of the University of Reading has written extensively on this subject, especially with regard to the relationship between employee productivity and access to fresh-air from outside the office environment.⁶¹

This inquiry therefore proposes that Government takes a lead role in ensuring that key data is not only made publicly available but also influences the development of a cost-benefit analysis into commercial developments in the public realm. This could with advantage be extended to public sector educational establishments.

There should also be a rethink of how Government interacts with research bodies and research councils to improve evidence-based policy making in relation to the built environment. The inquiry heard criticisms of the lack of government support for research into the built environment, especially with regard to that of post-occupancy evaluation, and a lack of coordination between disparate government departments and agencies.

RECOMMENDATION 16

Government should establish a formal cost-benefit analysis of how design elements impact on behaviour in the built environment.

4.2. The office environment

In looking into the effects of design on working practices, which are considered here as being part of the private sector, the inquiry learnt that many efforts to improve productivity by architects have been undermined by a flawed or irrelevant methodology. Ros Pomeroy of Spacelab Architects, a firm specialising in evidence-based workplace design, noted:

What needs to underpin [changing productivity behaviours] is some real clarity on what it is you're trying to do, which is more than just, "Well, we're going to have a nice, bright, shiny new office," and instead is about talking about it much more in terms of what the benefit is, both to the organization as a whole and to individuals who work in it. Are they happier, more motivated? Is there greater wellbeing?

-Ros Pomeroy, Spacelab Architects

Dr Kerstin Sailer of Space Syntax Laboratory at The Bartlett School, UCL, explained that access to daylight⁶² was a key area that could enhance worker wellbeing and productivity. She noted a research paper by the School of Architecture at the University of Illinois at Urbana-Champaign, USA, demonstrating a beneficial effect of access to daylight on workplace performance⁶³.

⁶⁰ Osborne Clarke, *Smart Cities in Europe: The Future of the Built Environment*, 2016, (pg. 7)

⁶¹ Clements-Croome D, *Creative and Productive Workplaces: A Review*, *Intelligent Buildings International*, Vol 7 (4), 2015 (pg. 164)

⁶² Sailer K, *Response to the Design Commission*, 2015

⁶³ Boubekri M *et al*, *Impact of windows and daylight exposure on overall health and sleep quality of office workers: a case-control pilot study*, University of Illinois at Urbana-Champaign, 2014

UK policy on access to daylight for private sector employers is unclear compared to such countries as Germany and Sweden, which have clear rules and regulations for the maximum distance any desk can be from natural daylight. In Germany, for example, access to light in the private sector is regulated by the *Bundesanstalt für Arbeitsschutz und Arbeitsmedizin* or the Federal Institute for Occupational Safety and Health (BAuA).

Further evidence to the inquiry explored the role of lighting in influencing behaviour in the workplace, with our circadian rhythms influenced by different colour temperatures of LED lights. In a study called Human Spaces⁶⁴, individuals working in office environments with so-called ‘natural elements’ reported a 13 per cent higher level of wellbeing and worked 8 per cent more productively. The top five natural elements described as being most appealing to workers were: natural light; quiet working space; a view of the sea; indoor plants; and bright colours.

We heard in the evidence sessions that many factors interact in the way that organisations and their buildings come together to create more (or less) productive environments: the effect of spatial layout on patterns of movement leading to patterns of interaction, communication and information flow; the effects of light or ambient noise on ability to concentrate; and the effects of user choice over how they occupy space and control their environmental conditions. All of these interactions give rise to a complexity of data and evidence that require designers to develop new approaches to the design and operational management of buildings. It is for this reason that post occupancy studies are urgently required to help transform organisations into ‘learning organisations’.

Some of the evidence to the inquiry reflected criticism of office environments that are centrally controlled and remove local autonomy from the individual. In particular, large, shared, open plan office space is unpopular according to some evidence, because individuals are unable to affect or alter their environmental conditions.

It became clear to the inquiry just how much policy makers have failed to account for how individuals are affected by their surroundings when it comes to economic productivity.

For example, the House of Lords *Building Better Places* report made almost no reference to the role of the office in the built environment, despite the fact that millions of British people spend upwards of 40 hours a week inside one.

RECOMMENDATION 17

Government - in cooperation with spatial experts and the private sector - should work to ensure that employees have autonomy over their working environment.

In particular, this should ensure that the design of office environments places emphasis on giving their workforce sufficient access to daylight, control of temperature, and fresh air.

⁶⁴ Human Spaces, *The Global Impact of Biophilic Design in the Workplace*, 2014

THE HOUSING CRISIS

Housing in isolation was not considered by this inquiry, but the Commission notes the importance of housing on behaviour. Throughout the inquiry, numerous individuals and written evidence pointed to the importance of housing to the built environment and how individuals interact with it.

5.1. Improving design principles for British homes

Alex Ely of Mae architecture practice, part of whose philosophy is ‘finding new possibilities for how our built environment can contribute to life and society’, gave evidence of “the chronic impact that poor design of homes and residential neighbourhoods can have on health, academic achievement or family stress”⁶⁵.

Dr Elanor Warwick, Head of Strategic Research at Affinity Sutton housing association and formally Head of Research at CABE, noted a growing tendency in many areas of housing – private as well as social - to treat mental wellbeing as a peripheral matter the design of new housing and office stock was being considered.

Alex Ely cited evidence that ‘the influence of indoor climate, light and the number and quality of green areas on well-being and diagnosed health problems like fatigue and hypertension is noteworthy, as is the strong influence of housing satisfaction on wellbeing’. This particularly affected the most vulnerable in society, particularly the elderly. He drew attention to the isolation experienced by many elderly residents of care homes, and emphasised the need to ‘find design solutions that encourage chance encounters and sociability’ through such means as winter gardens along access routes which could provide ‘places for pause and social interaction’, and access galleries which connected with ‘private and secure gardens that offer space for growing communities and shared endeavour’.

Alex Ely’s evidence complemented a study by Queen Mary, University of London and the London Borough of Greenwich, given in written evidence that confirmed an association between housing, its wider neighbourhood and mental well-being. Control over the internal environment, good design and maintenance, absence of noise, control of crime and anti-social behaviour, and access to a good quality public realm were among key factors found to promote good mental health.

The authors highlighted ‘the need to intervene on both design and social features of residential areas to promote mental well-being’.

Alex Ely also pointed to a number of authoritative surveys which recognised that the costs of primary health care, mental health, education and policing are reduced in areas of better quality housing by a factor of five to seven times, with the caveat that “even given fifty percent tolerance, this is a large and significant number.” He quoted Shelter’s 2006 Report that overcrowding produced quantifiable risk of infection, poorer school performance because of lack of space and privacy, and anxiety and depression.⁶⁶

⁶⁵ Mae Architects. *Evidence to the Design Commission*, July 2015 (pg. 2)

⁶⁶ Shelter, *Chance of a lifetime The impact of bad housing on children’s lives*, 2006 (pp. 8-9)

Following a report by the then Cabinet Office Behavioural Insights Team into the Hillington Square estate, King's Lynn⁶⁷, the Mae partnership redesigned part of it and cited the results of a post-occupancy survey of the residents which found that 'past noise, crime and problems with drug use had all markedly improved.' Similar results were shown following the regeneration of the Holly Street estate in East London, where there was not only a marked drop in violent incidents, reported theft and the fear of gang-related activity, as well as fear in general, but also in visits to the doctor, attributed partly to the residents' new-found freedom to go out and take more exercise.

5.2. Government housing strategy

Of course, not being able to afford a home, or to afford one within reasonable distance of work and services, has itself an adverse effect on behaviour. Although a shortage of housing is not a uniquely British problem, it is more significant in the United Kingdom than in many comparable areas. A recent study by Policy Scotland at the University of Glasgow has made an extensive study of issues facing the housing sector across UK, Canada and Australia. Many of these, especially with regard to a supply-limited private market coupled with and high demand for affordable homes for low-income households, are common to London, Melbourne, Sydney, Vancouver and Toronto but are especially pronounced in the London and the commuter belt.

The Government has talked extensively about its desire to support increased private sector housing development, and to encourage home ownership. In the response to *Building Better Places*, it was stated that:

Affordable housing is one of the Government's priorities. Since 2010, the Government has delivered 293,000 affordable homes including around 210,000 affordable homes for rent. We announced at the Spending Review 2015 a doubling of the housing budget to over £20 billion. This includes £8 billion of investment to deliver 400,000 affordable homes starts by 2021 – the largest affordable housing programme since the 1970s⁶⁸

-HM Government, *Government Response to the Report of the House of Lords Select Committee on the Built Environment*

But this does not meet demand. This Government's target for one million new homes by 2020 - or 200,000 new homes a year - is simply insufficient. A report by the House of Lords Economic Affairs Committee recently stated a need for 300,000 new builds per year⁶⁹.

Whether the proposals in the 2017 Housing White Paper *Fixing our broken housing market*⁷⁰ will be sufficient to raise levels of supply to the necessary level remains to be seen.

Any solution has to come from both ends of the market – as well as dealing with a skills bottleneck. Whilst the scope of this goes beyond the remit of this inquiry, any subsequent considerations would be wise to deal with the skills bottleneck in design, infrastructure and construction before attempting to expand construction. This is especially relevant in the light of *Fixing our broken housing market*.

We welcome the government's intention to increase the resources available to local planning authorities to speed up the processing of planning applications for new homes, and the intention that some of the proposed £25 million capacity funding for 'ambitious authorities in areas of high housing need' will be used for 'engaging communities on the design and mix of new homes.' This has to be set, though, in the context of wider pressures on local government funding and the resulting loss of design staff and skills from planning departments.

⁶⁷ Dezeen, *Mae Architects gives second life to unloved Hillington Square housing estate*, 14th January 2016

⁶⁸ HM Government. *Government Response to the Report of the House of Lords Select Committee on the Built Environment*, 2015 (pg. 25)

⁶⁹ House of Lords, *Building More Homes*, 2016 (pg. 5)

⁷⁰ HM Government, *Fixing our broken housing market*, 7th February 2017

Organisations such as Design Council Cabi and the local architecture centres can offer additional expertise and capacity but it is important for local planning authorities to have dedicated advice based on good local knowledge. Beyond the capacity fund, some of the new money from increased fees should be made available to replace these losses, not just to accelerate box-ticking. Without access to skilled design staff, and adequate training, neither councillors, nor communities preparing neighbourhood plans and responding to planning applications can meet the White Paper's aspirations for good design.

The emphasis in fixing our broken housing market on further strengthening the NPPF's support for good design is especially important in the context of this inquiry. We particularly welcome the White Paper's recognition that how neighbourhoods are designed is every bit as "*fundamental to creating healthy and attractive places where people genuinely want to live, and which can cater for all members of the community, young or old*"⁷¹ as what homes look like.

The endorsement of design standards such as Building for Life, the recommendation to use design codes and, where appropriate, pattern books, and the closer engagement of local people in design could all help to achieve this goal.

5.3. Building better places

In addition to local authorities and communities needing access to design skills, though, developers need architectural, urban design and landscaping expertise. Based on precedent, it is apparent that many lack it. The best house builders build excellent homes in delightful neighbourhoods. The rest of the industry now needs to accept the government's challenge in the White Paper, step up to the plate, employ the best designers and deliver great neighbourhoods for everybody.

In *Building Better Places*, it was recommended that the Government should include supporting housing associations in their aspiration to increase housing supply, including reviewing the impact of financial constraints and changes to Government policy.

We welcome the Government's support for housing associations, as stated in the prospectus for the Shared Ownership and Affordable Homes Programme for 2016-21 and *Fixing Our Broken Housing Market*. This Inquiry also considered that Housing Associations could influence behaviour positively.

We heard extensively on the subject of Housing Associations from Alex Ely, who also gave an overview of many of the pressures facing this area of the housing economy. Housing Associations, not being Councils or Council services, are usually non-profit private sector entities. They are tasked to use any profit for maintenance and for building extra homes but they cannot carry the sort of reserves needed to withstand the initial pressures of right to buy and the associated upkeep and development of the surrounding built environment⁷².

As, because of heavy discounting, people will be acquiring homes well below market value, Housing Associations are unlikely to be in a position wherein they could replace more than 20 per cent of the housing stock returned to private hands. Therefore Housing Associations are impeded from sufficient provision.

More directly related to behaviour, Housing Associations also provide specialist housing, which is quite often cross-funded out of the mainstream budget.

⁷¹ *Ibid* (pg. 29)

⁷² Ely A. *Oral Evidence to the Commission*, January 2016

While specialist housing will largely be excluded from Right To Buy, it is still likely to face extreme difficulties in maintaining this support role if half the mainstream stock is sold and funding sources such as Supporting People⁷³ are unable to reach all those in need.

To ensure that the quality of housing and neighbourhood design demanded by *Fixing our broken homes* can be delivered, the government should:

RECOMMENDATION 18

Local authorities should be encouraged to devote some of the additional resources available from the £25 million capacity fund and increased planning fees to procuring design advice and training for councillors and communities involved in planning new residential development.

RECOMMENDATION 19

House builders should be compelled to employ appropriately qualified urban designers, architects and landscape architects to ensure that schemes meet the highest standards of housing and neighbourhood design.

⁷³ Supporting People is the term given to the Government funding programme that funds provision for housing related support services to a landlord, housing association or other body.

CONCLUSION

PLACES FOR THE FUTURE

The built environment is something that we all interact with day in, day out. It is something that is vital to our everyday lives, but for decades it has been on the periphery of government policy.

This report sets out a number of innovative policy recommendations that aim to redress this balance, aiming towards a healthier and more productive society that encourages better working practices for central government, local authorities and the private sector.

It is written in the context of challenging times for the United Kingdom, where pressure on public finances is coupled with the obvious difficulties associated with the forthcoming withdrawal from the United Kingdom.

However, it also recognises that a more interventionist approach to economic development, not least the recently announced industrial strategy, has a role to play in developing a new approach to how our houses and public places are developed.

It also shows that architects, academics, Ministers, councils and housebuilders can learn much from one another when developing a new approach to the urban realm and rural areas.

These policy recommendations are not set out to be prescriptive or onerous, but to balance the differing views of various sectors in a way that – if promoted by policy makers – has the potential to deliver a step change in Britain's built environment and our relationship with it.

WE HOPE THAT YOU WILL WORK WITH US TO DEVELOP THIS STRATEGY AND TO HELP MAKE BRITAIN A BETTER PLACE TO LIVE, WORK AND RELAX.

RECOMMENDATIONS

WHICH APPLY TO YOU?

Recommendations for **CENTRAL GOVERNMENT**

1 – 2 – 3 – 7 – 9 – 10 – 11 – 12 – 14 – 15 – 17 – 19

Recommendations for **LOCAL AUTHORITIES**

4 – 5 – 6 – 7 – 8 – 11 – 12 – 13 – 15 – 18

Recommendations for the **PRIVATE SECTOR**

2 – 8 – 9 – 12 – 14 – 17 – 19

1. Healthy Behaviours

We found evidence that the built environment can exert both positive and negative effects on human behaviour, thus affecting health.

RECOMMENDATION 1

Government should integrate and co-ordinate decision making for public health with the way in which this interacts with the public realm.

RECOMMENDATION 2

As a major procurer of buildings and services, Government should play a lead role in encouraging high design standards and sharing best practice with the private sector. Ministers should co-ordinate the work of research councils to promote longitudinal studies into the built environment, especially post-occupancy evaluation and learning, as well as investigating long-term trends.

RECOMMENDATION 3

Government should require Health Impact Assessments to be a material consideration in planning decisions on major developments.

RECOMMENDATION 4

Health and Wellbeing Boards should be obliged to develop links across local authority structures to improve public health considerations in planning and other relevant decisions.

2. Environmentally Sustainable Behaviours

We heard evidence that the design of the built environment can encourage people to adopt more (or less) sustainable behaviours.

RECOMMENDATION 5

Local authorities should ensure adequate capacity in the planning system – working in the context of localism, devolution, and elected City Mayors – to ensure that best practice is followed when considering the design, construction and future management and maintenance of the built environment in new developments.

RECOMMENDATION 6

Local authorities should set minimum design standards to access to public transport infrastructure and the public realm when making planning decisions.

RECOMMENDATION 7

Targets should be set for the promotion and provision of pedestrian and cycling infrastructure in local authority development plans.

RECOMMENDATION 8

Biodiversity should be placed at the heart of all new developments and public places, including adopting a replacement ratio of 2:1 when and where mature trees are felled as part of local authority works or planning permission approvals.

RECOMMENDATION 9

Regulations concerning energy use and air quality should move rapidly from one of model-based compliance to one of measured performance-in-use with full disclosure.

RECOMMENDATION 10

Given the almost universal difficulty of operating buildings in the manner that was anticipated, a Royal Commission or Select Committee inquiry should be established to explore the mismatch between design intent of control systems and their operability and associated aspects.

RECOMMENDATION 11

In order to facilitate demand reduction for energy, Government should commit to make full use of smart meters and the internet of things to track trends across the general energy network.

3. Socially Cohesive Behaviours

Evidence was found of the effects of the design of the built environment on social cohesion through its effects on creating or inhibiting co-presence in space.

RECOMMENDATION 12

Local authorities should appoint bodies that work to develop the principles of an inclusive built environment that does not discriminate against users and use a scrutiny process to ensure that design works for everyone.

RECOMMENDATION 13

New developments should be built around a “foot-first” approach that prioritises the individual user over private vehicles, with the principles of Manual for Streets 2 formally incorporated into the reformed National Planning Policy Framework.

RECOMMENDATION 14

Planning requirements for new housing stock and workplaces should be conducive to facilitating social engagement – especially where health and mobility could otherwise be compromised.

RECOMMENDATION 15

Efforts should be made to mitigate the consequences of neglected maintenance (the so-called Broken Window effect), for example, by giving tenants and local groups greater freedom to take up short-term ownership of closed and vacant shop units.

4. Productive, Innovative and Creative Behaviours

Evidence was heard of the effects of the design of the built environment on innovation and communication in work environments and communities.

RECOMMENDATION 16

Government should establish a formal cost-benefit analysis of how design elements impact on behaviour in the built environment.

RECOMMENDATION 17

Government - in cooperation with spatial experts and the private sector - should work to ensure that employees have autonomy over their working environment. In particular, this should ensure that the design of office environments places emphasis on giving their workforce sufficient access to daylight, control of temperature, and fresh air.

5. The Housing Crisis

Finally, considerations are also made regarding the lack of affordable housing.

RECOMMENDATION 18

Local authorities should be encouraged to devote some of the additional resources available from the £25 million capacity fund and increased planning fees to procuring design advice and training for councillors and communities involved in planning new residential development.

RECOMMENDATION 19

House builders should be compelled to employ appropriately qualified urban designers, architects and landscape architects to ensure that schemes meet the highest standards of housing and neighbourhood design.

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ABOUT THE DESIGN COMMISSION

The Design Commission is the in-depth research arm of the All-Party Parliamentary Design & Innovation Group.

It is an industry-led body, which conducts high level research aimed at driving thinking around design policy in the UK. The Commission's remit is to conduct investigative research into particular areas or policy problems as they relate to, or could benefit from, design.

The Design Commission is composed of parliamentarians and leading representatives from business, industry and the public sector. Its purpose is to explore, through research, how design can drive economic and social improvement, and how government and business can better understand the importance of design.

We conduct investigations and inquiries to identify opportunities and obstacles. Recognising that the UK has been a world-leader in design for many years, it contributes to the understanding of how to maintain a leading position in the future, and how the considerable skills of the design sector can support development in other areas. Through its work, the Commission demonstrates to government the value of design input at the highest level, as well as contributing to and augmenting the debate around national design policy.

The Commission is not time-limited in this task. There is currently a need for more strategic thinking to link design, policy and politics more consistently. The strength of the Commission is in bringing the variety of ideas and considerable experience of its members to bear in thinking about policy, society and the economy; in establishing new frontiers where design thinking can contribute; and in using the cumulative weight of its members' standing to gather support and encourage receptiveness from government.

The Design Commission was established in 2010 by the Associate Parliamentary Design and Innovation Group (now the All-Party Parliamentary Design & Innovation Group), in order to further its aims of promoting intelligent debate of design policy.

The secretariat is provided by Policy Connect, a social enterprise that promotes evidence-based policy development.

INQUIRY SPONSOR

The BRE Trust is the largest UK charity dedicated specifically to research and education in the built environment.

Set up in 2002 to advance knowledge, innovation and communication for public benefit, the Trust uses all profits made by the BRE Group to fund new research and education programmes that will help to meet its goal of 'building a better world together'.

The Trust commissions research into the challenges faced by the built environment and publishes project findings which act as authoritative guidance to the construction industry. Through its activities, the Trust aims to achieve:

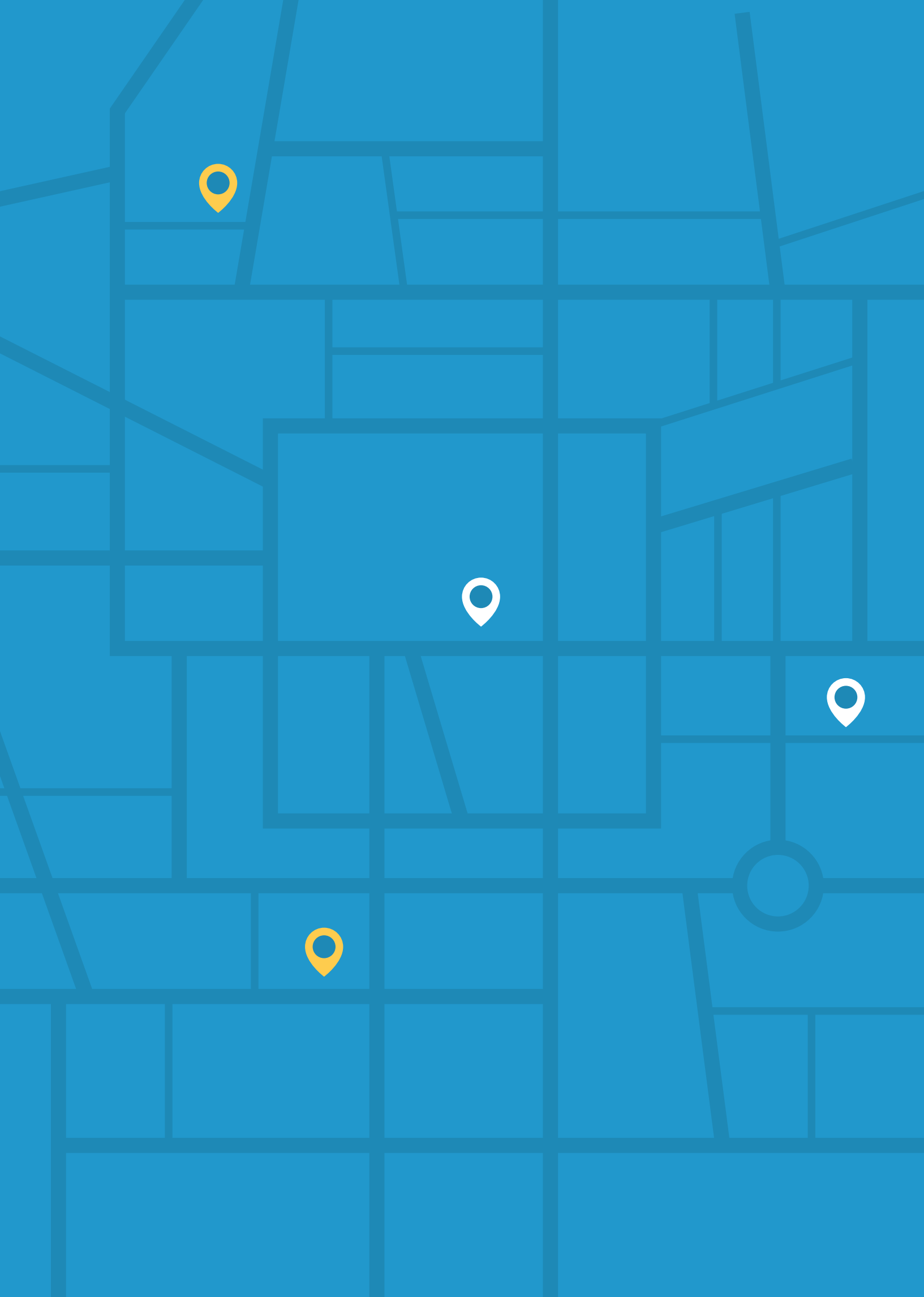
- A higher quality built environment
- Built facilities that offer improved functionality and value for money
- A more efficient and sustainable construction sector with a higher level of innovative practice.

In collaboration with academia and industry, the Trust awards scholarships and bursaries to PhD and MSc students, and provides financial support to the Chairs of five University Centres of Excellence.

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